

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Smith, et al.

Serial No.: 9/660,257

Filed: 09/12/2000

Title: METHODS AND MIXTURES FOR TREATING DISTRESSED TREES

Art Unit: 3643

Examiner: Gellner

Hon. Commissioner of Patents
Box Fee Amendment
Washington, D. C. 20231.

Certificate of Mailing Express Mail

I hereby state that on reasonable information and belief, I expect that this Express Mail correspondence will be deposited with the U.S. Postal Service as U.S. ~~first class mail~~ with sufficient postage, in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231, on the date indicated below.

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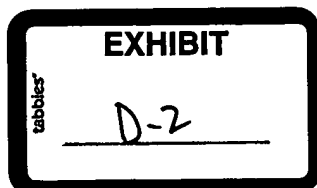
AFFIDAVIT

WHEREAS, the undersigned,

I, Scott D. Russell, resident of 3001 Oak Tree Ave. #D14, Norman, County of Cleveland, Oklahoma 73072-8038 do hereby state that:

I am George Lynn Cross Research Professor of Botany in the Department of Botany and Microbiology; and Director of Samuel Roberts Noble Microscopy Laboratory at the University of Oklahoma in Norman, Oklahoma. In addition, I am Managing Editor of *Sexual Plant Reproduction* and President of the Botanical Society of America.

The applicants Dr. Don Smith and Peter Martin requested that I examine the patent application for "Methods and mixtures for treating distressed trees" attorney docket 22601-P002US. While I



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Affidavit of Scott D. Russell

In support of the Patent Application; Applicants: Smith, et al.; Serial No.: 9/660,257

Page 2 of 2

am not trained in the legal aspects of the challenges to his application, I have restrained myself to matters of botanical knowledge. My background is that of a professional botanist. My curriculum vita is available for inspection on the web at <http://www.ou.edu/cas/botany-micro/faculty/sdr-vita.shtml> and has been included as a separate attachment to this filing and includes all education, publications, presentations, and recognitions that I have received to date.

I have attached a point-by-point examination of the findings of the United States Patent and Trademark Office in rejecting Dr. Smith's patent application.

If there are any questions regarding these findings, I can be reached at the address and contacts given above.

This is in response to the Office Communication from the US Patent and Trademark Office on 22601-P002US, mailed 06/05/2002.

USPTO claims that the technique described by Dale (Fred Dale Special to the Star) anticipates the technique described by Don Smith in the current proposal. The technique described would kill a mature tree.

1. Dale described transplanting commercially-available container-grown horticulturally bred trees of typically three to five years of age. In contrast, Smith describes treating native plant species of more than 10 to 20 years of age or more, *in situ* (already planted) with root volume extending over 20 cubic meters in most situations.
2. Use of transplantation method described by Dale would result in tree death. The trees that Smith is proposing to manipulate have a minimum a ton of biomass.
3. Dale mentioned cyclic watering. This is a routine gardening practice, so it is unclear why the article by Dale would constitute a priority description for cyclic watering.
4. The Smith proposal applies auxin to a root system that is already established in the soil and is thus distinct from Dale's prior state-of-the-art. Dale's use for auxin was for plants with exposed bare roots that have not been established in the soil. The use of Rootone, stated in the brochure, is "preferred for azaleas, begonias, boxwood, chrysanthemums, crepe myrtle, euonymous, geraniums, holly, ivy, rhododendron, roses, and viburnum." This is not a recommended method for any established trees.
5. A Google search for the term "Rootone" and "established trees" provided no links to the use of this product on adult, planted trees. In each case, the page referred to taking cuttings of established trees. In other words, cutting off a branch (aerial shoot) and immersing the free, cut end in an auxin solution (immersion) does not resemble applying auxin to a root system that is currently in place and established in the ground.

6. The use of a water jet is not obvious. Use of the water jet is a subject of experimentation under field conditions. Field response to the application of water to the tree in the field is essential and not anticipated by the use of the technique in a laboratory. Field experimentation is essential as there is no known way to simulate the response of a mature, established tree of several tons within normal laboratory conditions. That the technique proved successful is not at all obvious. The technique described in the Smith proposal would have a tendency to disrupt the root structure rather than the technique of Dale that is specifically designed not to disrupt root structure.
7. The mention of the Miller patent on the use of an iron compound to rescue stressed plants applies to one and only one situation: the rescue of plants grown in iron-deprived soil or with compromised iron uptake. This is irrelevant to the current proposal. The Smith proposal addresses general stress caused by addition of soil overburden that would not change the iron nutritional status of the plant.

Summary:

1. The Smith claims are based on stimulating the stimulation of existing **roots established in the soil without using cuttings or transplantation**, creating a **rescue situation** where an **adult plant is maintained *in situ*** under circumstances in which it would normally die. For this reason, Dale (Fred Dale Special to the Star) does NOT anticipate the technique described by Don Smith in the current proposal.
2. The stress applied to the mature trees in the Smith proposal is a **general systemic stress** and **NOT a nutritional stress**. For this reason, the Miller patent does NOT anticipate the technique described by Don Smith in the current proposal. The Smith proposal did not propose addressing such specific nutritional stress as iron uptake.

Note: The views expressed on these pages represent those of the above person and do not necessarily reflect the views of, or represent endorsements by, the University of Oklahoma, the journal *Sexual Plant Reproduction* or the Botanical Society of America.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of

Affidavit of Scott D. Russell

In support of the Patent Application; Applicants: Smith, et al.; Serial No.: 9/660,257

Page 4 of 4

Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.


The Commissioner is hereby authorized to charge any fees or credit any overpayment to Deposit Account Number 23-2426 of WINSTEAD SECHREST & MINICK P.C.

If the Examiner has any questions or comments concerning this paper or the present application in general, the Examiner is invited to call the attorney for the patent applicants, James J. Murphy at (214) 745-5374.

Maker of Affidavit's signature:

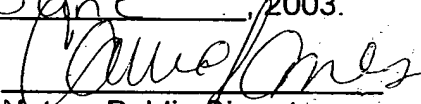
State of Oklahoma

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Scott D. Russell

Before me, Carrie Jones, a notary public, on this day personally appeared June 24, 2003, known to me to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same for the purposes and considerations therein expressed.

Given under my hand and seal on the 24 day of June, 2003.


Notary Public Signature
Carrie Jones
Notary Public Printed Name